

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in this application:

1. (Cancelled)
2. (Currently Amended) The prosthetic valve of claim ~~1~~24 wherein the anchor structure is formed from a lattice of interconnected elements, and has a substantially cylindrical configuration.
3. (Currently Amended) The prosthetic valve of claim ~~1~~24 wherein the structural frame comprises a material selected from the group consisting of stainless steel, tantalum, platinum alloys, niobium alloy, cobalt alloy, and nickel-titanium alloy.
4. (Currently Amended) The prosthetic valve of claim ~~1~~24 wherein the structural frame comprises a polymer.
5. (Currently Amended) The prosthetic valve of claim ~~1~~24 wherein the biocompatible membrane assembly is formed from a flexible membrane-like material.
6. (Original) The prosthetic valve of claim 5 wherein the membrane-like material is a biological material.
7. (Original) The prosthetic valve of claim 6 wherein the biological material is a vein.
8. (Original) The prosthetic valve of claim 5 wherein the membrane-like material is a synthetic material.
9. (Original) The prosthetic valve of claim 8 wherein the synthetic material is an elastomeric polymer.

10. (Original) The prosthetic valve of claim 8 wherein the synthetic material is a bioabsorbable material.
11. (Original) The prosthetic valve of claim 8 wherein the synthetic material further comprises a reinforcement fiber.
12. (Currently Amended) The prosthetic valve of claim ~~12~~ wherein at least a portion of the structural frame is coated with an agent.
13. (Original) The prosthetic valve of claim 12 wherein the agent coating contains a therapeutic agent.
14. (Original) The prosthetic valve of claim 12 wherein the agent coating contains a pharmaceutical agent.
15. (Original) The prosthetic valve of claim 12 wherein the agent coating comprises an agent-eluting layer.
16. (Currently Amended) The prosthetic valve of claim ~~12~~ wherein at least a portion of the membrane assembly is coated with an agent.
17. (Currently Amended) The prosthetic valve of claim ~~17~~ wherein the agent coating contains a therapeutic agent.
18. (Currently Amended) The prosthetic valve of claim ~~17~~ wherein the agent coating contains a pharmaceutical agent.
19. (Currently Amended) The prosthetic valve of claim ~~17~~ wherein the agent coating comprising an agent-eluting layer.

20. (Currently Amended) The prosthetic valve of claim ~~1~~24 wherein at least a portion of the membrane assembly is impregnated with a therapeutic agent.
21. (Currently Amended) The prosthetic valve of claim ~~1~~24 wherein at least a portion of the membrane assembly is impregnated with a pharmaceutical agent.
22. (Currently Amended) The prosthetic valve of claim ~~1~~24 wherein the connecting member is a substantially straight member oriented in a direction substantially parallel to the longitudinal axis.
23. (Cancelled)
24. (Currently Amended) A prosthetic valve comprising:
a radially expandable structural frame defining a longitudinal axis, including an anchor structure having first and second open ends, a connecting member having first and second ends, the first end of the connecting member being attached to the second end of the anchor structure, and a cantilever valve strut having first and second ends, The prosthetic valve of claim 1 wherein the first end of the cantilever valve strut is shaped into a semi-circular loop configuration and is cooperatively associated with the second end of the connecting member; and
a biocompatible membrane assembly having a substantially tubular configuration disposed longitudinally about the structural frame, the membrane assembly including a first end having a first diameter and a second end having a second diameter, wherein the first diameter is greater than the second diameter, the first end of the membrane assembly being attached along the second end of the cantilever valve strut.
25. (Currently Amended) The prosthetic valve of claim ~~1~~24 wherein the second end of the cantilever valve strut has a substantially straight shape and oriented in a direction substantially parallel to the longitudinal axis.
26. (Cancelled)

27. (Cancelled)

28. (Currently Amended) The prosthetic valve of claim ~~124~~ wherein the second end of the tubular biocompatible membrane has a closed end.

29. (Cancelled)

30. (Currently Amended) The prosthetic valve of claim ~~124~~ wherein the second end of the tubular biocompatible membrane moves from a substantially open to a substantially closed position by the cantilever valve strut.

31. (Currently Amended) The prosthetic valve of claim ~~124~~ wherein the structural frame further comprising a proximal collar attached to the second end of the connecting member and first end of the cantilever valve strut.

32. (Cancelled)

33. (Cancelled)

34. (Cancelled)

35. (Cancelled)

36. (New) A prosthetic valve comprising:

a radially expandable structural frame defining a longitudinal axis, including an anchor structure having first and second open ends, a connecting member having first and second ends, the first end of the connecting member being attached to the second end of the anchor structure, and a cantilever valve strut having first and second ends, the

first end of the cantilever valve strut being cooperatively associated with the second end of the connecting member; and

a biocompatible membrane assembly formed from a membrane-like biological vein, having a substantially tubular configuration disposed longitudinally about the structural frame, the membrane assembly including a first end having a first diameter and a second end having a second diameter, wherein the first diameter is greater than the second diameter, the first end of the membrane assembly being attached along the second end of the cantilever valve strut.